File No.: 16051-8US CC/DBB/iw

July 18, 2007
Montréal, Canada

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS:	Andrew Vaillant et al.
ASSIGNEE:	REPLICOR INC.
SERIAL NUMBER:	10/661,415
TITLE:	ANTIVIRAL OLIGONUCLEOTIDES TARGETING RSV
FILING DATE:	September 12, 2003
ART UNIT:	1648
EXAMINER:	HURT, Sharon L.

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR § 1.97(d)

Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450
U. S. A.

Sir:

Submitted herewith is Form PTO/SB/08A listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR § 1.56. A copy of each listed document is hereby submitted to comply with the provisions of 37 CFR §§ 1.97(d).

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR § 1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* prior art reference against the claims of the present application.

Applicants also submit that no item of information contained in the Information Disclosure Statement has been cited in a communication from a foreign Patent Office in a counterpart foreign application, and, to the knowledge of the undersigned person after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was

known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of the information disclosure statement.

STATEMENT OF RELEVANCY

WO 02/068582

The teaching of the inventors in the WO 02/068582 publication relates to the development of more stable and nuclease-resistant sequence dependent (or sequence complementary) antisense oligonucleotides that also have a higher affinity to mRNA. As a result, the inventors designed oligonucleotides containing six-membered azasugars (see page 10, lines 17-24 in WO 02/068582). As cited in Table 1 of WO 02/068582, random oligonucleotides containing six-membered azasugars (SEQ ID NOs: 20-24) are disclosed which have strong anti-HIV activity although they had no sequence specificity to *HIV-1* gene (see page 46, lines 7-10). Consequently, it is disclosed that the inhibitory effect of oligonucleotides containing six-membered azasugars on HIV-1 replication was not mediated by a sequence specific antisense mechanism against *HIV-1* gene, but rather mediated by inhibiting virus attachment on the cell surface (see page 67, lines 22-26). However, one skilled in the art would have construed from this that the antiviral activity seen was due to the six-membered azasugars, the inventors taking such an extensive departure from standard oligonucleotides. Furthermore, regarding the efficacy of the oligonucleotides disclosed in this publication, it is mentioned that these oligonucleotides did not inhibit SIV replication (page 71, lines 1-9) and poliovirus replication (page 72, lines 3-5). Thus, the oligonucleotides taught in WO 02/068582 had no influence on the replication of any other viruses but HIV-1 (as mentioned on page 72, lines 23-25). Thus, this document does not anticipate the claims as presently pending and further is a direct teaching against the present invention as now claimed.

WO 03/097661

Regarding the WO 03/097661 publication, by the nature of the sequences disclosed in this publication, it was concluded that the anti-HIV activity of phosphorothioate oligonucleotides of 37-mer or longer is sequence and structure independent (see page 20, lines 22-24 of WO 03/097661 publication). It is also important to note that all examples disclosed in this publication present *in vitro* results.

Following the strict guidelines from the USPTO regarding invention related to treating cancer and HIV infection, the teaching found in WO 03/097661 is not enabling for a

treatment against HIV infection in a subject. The specification, while being enabling for inhibition of part of the HIV life cycle *in vitro* (in cell culture), does not reasonably provide enablement for the prophylaxis or treatment of a HIV infection *in vivo*, especially if the subject is a human. It is further believed that the USPTO position is such that, given the divergence of *in vitro* and *in vivo* HIV specific responses and the clinical relevance one skilled in the art would be burdened with an undue quantity of *in vivo* experiments in order to make and use the invention taught in the publication such as WO 03/097661, since it did not disclose any clear-cut evidence to demonstrate that the claimed oligonucleotides can prevent or treat HIV infection. Because of the absence of working examples and specific teachings of the clinical efficacy, therapeutic index, and pharmacokinetic properties of the oligonucleotides, those with ordinary skill in the art would not be able to use the claimed method for the prophylaxis or treatment of HIV infection with the oligonucleotides claimed in WO 03/097661.

Applicants respectfully request that the documents listed in the enclosed form be made of record in the present application and that an initialed copy of Form PTO/SB/08A be returned in accordance with MPEP § 609.

The Commissioner is hereby authorized to withdraw the fees in the amount of $180.00 for the submission of an Information Disclosure Statement from Deposit Account No. 19-5113 as well as any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-5113.

Respectfully submitted,

Christian Cawthorn, Reg. No. 47,352
Agent of record
Tel: (514) 847-4256
Fax: (514) 288-8389

OGILVY RENAULT LLP
1981 McGill College, Suite 1600
Montreal, Quebec, Canada H3A 3C8
Canada

Enc. PTO/SB/08A & Publications (2)